



June 1, 2005

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## Communication Site Batteries

By Doug Chandler

Floyd Ritter, our Strategic Network Planner, is preparing a business case for the replacement of batteries used for back-up power at communications sites around the state.

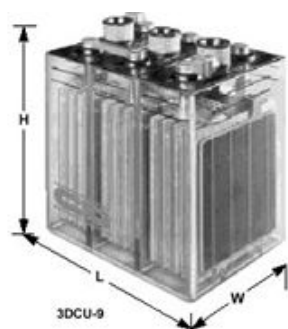
There are two common battery types, and if you design communications sites, you should really know the difference.

**Wet Cell (flooded cell):** Most of these are acid-filled and encased in glass or heavy plastics. They are comparatively very expensive, have dangerous vapors, cannot be stored or used in a facility where people work, are extremely heavy, require special materials to handle, and require periodic refilling with purified water.

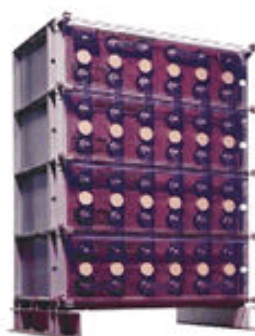
**Dry Cell (Gel Cell):** These cost a fraction of what wet cells cost for the same voltage and current rating, are lighter, completely sealed and safe, and can be stored and used even in office spaces.

Obviously, the dry cell is the way to go right? Guess again. The wet cells we purchased for communications sites all around the state 15 years ago are still well up in the 90% plus range of original specs and performance. Dry cells we purchased just a few years ago are dropping like flies. As Floyd moves forward with the purchasing of new batteries, it's the new dry cells that are continually being replaced.

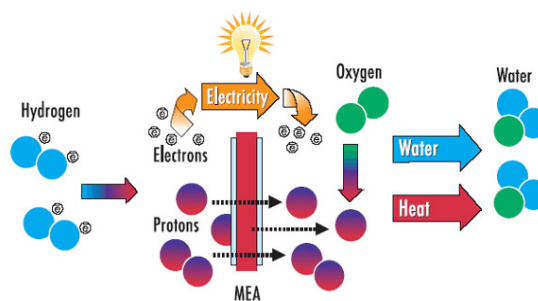
There is a relatively new contender for back-up power waiting in the wings. Hydrogen fuel cells are coming on strong in the contest for communications site backup power. Though price-prohibitive as of yet, they offer very clean power, the canisters are easy to transport, and we can 'refill' used cells by simply replacing small canisters of hydrogen. The only bi-products are water and a little heat. We've had vendors come in and show us product, and when the prices come down (which they are sure to do) I'm sure we'll see hydrogen cell technologies more commonly used.



Wet Cells



Dry Cells



Hydrogen Cells

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## Editorial Opinion - Convergence

By Boyd Webb, Strategic Network Planner

Convergence is a hot topic in wireless communications today. In a perfect world the concept would unify competing technologies while lowering system costs, and increase the efficiency of wireless networks overall.

# CONVERGENCE

The promise behind convergence goes something like this: Voice, Data, Instant Messaging, Video, and a whole slew of other exciting technological marvels all wrapped up in a single very portable device. What's not to love?

Few people argue with the achievability of the idyllic scenario, but that's where the handshaking ends. As it turns out, the convergence of competing wireless technologies, with all of the benefits, is near political suicide for anyone brave enough to actually promote the idea.

Equipment vendors are also reluctant to cooperate with common air interface standards like P25, and Scalable Adaptive Modulation. The notion that there are many ways to skin a proverbial cat is lost in the battle for market share among competing vendors. And after all the talk about interoperability it becomes crystal clear that network compatibility serves the interest of the consumer, but not necessarily the vendors themselves.

On the other hand wireless network providers tend to promote only the technologies in which they are invested. Agency managers, network planners, system engineers, and technicians, all have their own ideas about what will, and will not, work for the consumer. And the consumer is often subjected to misinformation, half truths, and all out lies, while attempting to make a well reasoned decision.

Irregardless, one has to believe that the convergence of wireless technologies will eventually prevail. Perhaps we need an open forum where new ideas can be presented and openly discussed. Maybe together we can find solutions that work for everyone. Wait a minute... that sounds like UWIN a couple of years ago when people were still open to new ideas. Now it seems the only thing people are interested in discussing is how to build a bigger fence.

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## Snow Melting

By Doug Chandler

Areas experiencing flooding don't care much for the rapidly melting snow, but the heavier-than-usual snow pack has delayed us from being able to get started on our mountaintop projects.

The photo to the right was taken by Trevor Pollock, our Cedar Radio tech. It shows the last drift keeping our trucks from the Frisco Peak site. Mobile Data and 800MHz conventional deployment are just two of the many mountaintop projects we need to get underway immediately if we're to have a chance of completing the workload this summer.



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## Calendar

### **UWIN Governance Board**

Friday June 10, 2005

10:00am - Noon

Capitol East Building, Beehive Room

### **UCAN Meeting**

Tuesday June 14, 2005

2:00 - 4:00 pm

VECC

5360 South 5885 West

Salt Lake City

### **911 Committee**

Thursday June 16, 2005

10:00am - Noon

Rampton Complex

4501 South 2700 West

UHP Large Conference Room

### **NASTD Western Region Seminar**

Salt Lake Hilton

June 4-8

[Conference Link and Agenda](#)

### **Utah Sheriff's Association 10<sup>th</sup> Annual Conference and Exposition**

St. George Dixie Center

September 11-13

[Conference Link](#)

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#### **Editor**

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